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A Memoir on the Birds of Greenland

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Sabine, Edward

XXXIV. *A Memoir on the Birds of Greenland; with Descriptions and Notes on the Species observed in the late Voyage of Discovery in Davis's Straits and Baffin's Bay. By Captain Edward Sabine of the Royal Artillery, F.R.S. and L.S.*

Read April 6, 1819.

I HAVE much pleasure in presenting to the Linnean Society a Memoir on the Birds of Greenland. In accompanying the expedition which sailed last year in search of a North-West passage, I had opportunities, when not engaged in the official duties which I was sent to perform, of making some observations on the Ornithology of that part of the world.

Of fifty species enumerated by various authors as having been found in Greenland, twenty-four fell under my notice: some interesting facts relating to these have been ascertained, and four other species have been added to the list, one of which has not been before described by any naturalist. That so few birds were seen is to be explained by the circumstance, that the ships very rarely approached the shores so as to permit a landing; but it is confidently hoped, that the voyage which is about to be undertaken will afford facilities for more extensive research.

I have confined my account to the birds seen either in Davis's Straits or in Baffin's Bay, omitting all notice of those observed on the voyage when we were nearer the shores of the British islands than those of any part of Greenland.

The works which have been generally quoted are the following:

Gmelin,

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Gmelin, *Systema Naturæ Linnæi.*
Latham's *General Synopsis of Birds.*
Latham's *Index Ornithologicus.*
Fabricii *Fauna Groenlandica.*
Brünnichii *Ornithologia Borealis.*
Pennant's *Arctic Zoology.*
Linnæi *Fauna Suecica*, Editio altera.
Müller, *Zoologiæ Danicæ Prodromus.*
Temminck, *Manuel d'Ornithologie.*
Wilson's *American Ornithology.*
Pennant's *British Zoology.* Second edition.
Montagu's *Ornithological Dictionary and Supplement.*

I did not consider it expedient to introduce the synonyms of or reference to any other authors than those above mentioned, except the particular circumstance of any individual case required it; where such occurs, the title of the work will appear in the reference itself.

1. FALCO ISLANDICUS. *Jerfalcon.*

F. Islandicus. *Gmel.* i. 275. *Lath. Ind. Orn.* i. 32. *Temm.* 33.—White Iceland Falcon. *Lath. Syn.* i. 71.—F. Candicans. *Gmel.* i. 275.—White Jerfalcon. *Lath. Syn.* i. 83. & *Supp.* 21.—Gyrfalcon. *Arct. Zool.* ii. 221. *Br. Zool.* i. 217.—Jerfalcon. *Mont. Dict.* & *Supp.*—F. Islandus. *Gmel.* i. 271. *Fabr.* 58. *Brün. no.* 7 & 8. *Müll. no.* 73.—Spotted Iceland Falcon. *Lath. Syn.* i. 71.—F. Rusticolus. *Gmel.* i. 268. *Fabr.* 55. *Faun. Suec.* 19. *Lath. Ind. Orn.* i. 28.—Collared Falcon. *Arct. Zool.* ii. 222. *Lath. Syn.* i. 56.

YOUNG BIRDS. F. Gyrfalco. *Gmel.* i. 275. *Lath. Ind. Orn.* i. 32. *Faun. Suec.* 22.—F. Fuscus. *Fabr.* 56. *Brün. no.* 9.—F. Sacer. *Gmel.* i. 273. *Lath. Ind. Orn.* i. 34.—Sacre Falcon. *Lath. Syn.* i. 77 & 78. & *Supp.* 20. *Arct. Zool.* ii. 202.—Dusky Falcon. *Arct. Zool.* ii. 220.—American Falcon. *Lath. Syn. Supp.* 38.—Brown Jerfalcon. *Lath. Syn.* i. 82.—Iceland Falcon. *Lath. Syn.* i. 70. *Arct. Zool.* ii. 216.—Greenland Falcon. *Lath. Syn. Supp.* 36.

The Jerfalcon was seen in a single instance at Baffin's Three Islands, on the west coast of Greenland, in lat. 74°. It was wounded, but got away.

The

The progress of this bird from youth, when it is quite brown, to the almost perfect whiteness of its maturity, forms a succession of changes in which each individual feather gradually loses a portion of its brown as the white edging on the margin increases in breadth from year to year; such has been the cause of the variety of synonyms which have been referred to.

2. FALCO PEREGRINUS. *Peregrine Falcon.*

F. Peregrinus. *Gmel.* i. 272. *Lath. Ind. Orn.* i. 33. *Temm.* 34.—Peregrine Falcon. *Br. Zool.* i. 218. *Arct. Zool.* ii. 202. *Lath. Syn.* i. 73. & *Supp.* 18. *Mont. Dict.* & *Supp.* —F. Communis. *Gmel.* i. 270. *Lath. Ind. Orn.* i. 30.—Common Falcon. *Lath. Syn.* i. 65.—Lanner. *Br. Zool.* i. 223.—Great-footed Hawk. *Wil. Am. Orn.* ix. 120.

Killed in the third week of September in lat. 66° N. and long. 58° W., and therefore most probably from America. Fabricius does not mention this bird as an inhabitant of Greenland. The specimen from which the note is taken was a young bird, and remained for some hours about the ship in company with three others. I have not hesitated to add the synonym of the *F. communis* to the other received ones of this species; the French specimens under that name fully proving the identity. The broad black line or patch, extending from the eye down to the throat, is a distinguishing mark of this bird, and of the *Falco Subbuteo*, or Hobby, in the various states of their plumage; the difference in size of the two species will always prevent their being confounded.

I suspect that the *Falco Lannarius* of Brünnich is a Merlin, and therefore have not referred to it. The Lanner of the *British Zoology* is a young Peregrine Falcon; but the *F. Lannarius* of Linneus and Gmelin, of Latham and others, as well as the Lanner of the *Arctic Zoology* and of Latham's *Synopsis*, is a distinct species (as I am informed by M. Temminck) common in Russia, Poland, and Hungary, to which also the *F. Stellaris* and Starry Falcon of authors must be referred, being the same bird in a younger state.

state. These have hitherto been usually referred to as synonyms of the *F. Peregrinus.*

3. CORVUS CORAX. *Raven.*

C. Corax. *Gmel.* i. 364. *Lath. Ind. Orn.* i. 150. *Temm.* 66. *Fabr.* 62. *Faun. Suec.* 29. *Müll. no.* 86. *Brün. no.* 8.—Raven. *Lath. Syn.* i. 367. & *Supp.* 74. *Arct. Zool.* ii. 245. *Br. Zool.* i. 279. *Mont. Dict. & Supp. Wil. Am. Orn.* ix. 113.

Killed at Hare Island, and seen on the west coast of Greenland in lat. $75\frac{1}{2}^{\circ}$. We did not notice a pied one, although such a variety is said to be common in arctic countries.

4. TETRAO LAGOPUS. *Ptarmigan.*

T. Lagopus. *Gmel.* i. 749. *Lath. Ind. Orn.* ii. 639. *Faun. Suec.* 73. *Brün. nos.* 198 & 199. *Fabr.* 114. *Müll. no.* 223. *Temm.* 293.—Ptarmigan. *Lath. Syn.* iv. 741. *Br. Zool.* i. 359. *Arct. Zool.* ii. 315. *Mont. Dict. & Supp.*—T. Rupestris. *Gmel.* i. 751. *Lath. Ind. Orn.* ii. 640.—Rock Grous. *Lath. Syn. Supp.* 217. *Arct. Zool.* ii. 312.

Killed June 19th at Hare Island. The females were laying: they had been abundant, but only a few were left on our arrival, several whalers having anchored there before us, the crews of which had destroyed them. Were I not quite satisfied of the identity of the species, the difference of the plumage of these birds would seem to justify a persuasion that they are distinct; but in all essential characteristics they are the *T. Lagopus.* The peculiarities which are to be noticed have escaped the attention even of Fabricius; who nevertheless describes these birds as seen during the summer. The period when they fell under my observation being that of their full breeding season, it must unquestionably be allowed that they were in perfect summer plumage. The male birds were wholly white, with the exception of the black line from the bill to the eye, of the under tail-feathers, and a very few scattered black feathers on the top of the head: even the shafts of the large quill-feathers were white; the females had not the usual portion of white on the breast; the coverings of the legs

legs were white, as were the quill-feathers, but the shafts of these were dark; the whole of the coloured plumage was more rich and gaudy than in Scottish specimens. In the latter the ash-colour predominates, in the Greenland Ptarmigan the orange. The bars of brown are also broader and deeper in the Greenland specimens.

5. EMBERIZA NIVALIS. *Snow Bunting.*

E. Nivalis. *Gmel.* i. 866. *Lath. Ind. Orn.* i. 397. *Temm.* 188. *Faun. Suec.* 82. *Brün. nos.* 245 & 246. *Müll. no.* 250. *Fabr.* 117.—Snow Bunting. *Lath. Syn.* iii. 161. & *Supp.* 157. *Br. Zool.* i. 444. *Arct. Zool.* ii. 355. *Mont. Dict. Supp. & Appen. Wil. Am. Orn.* iii. 36.—E. Glacialis. *Lath. Ind. Orn.* i. 398.—Tawny Bunting. *Lath. Syn.* iii. 164. *Br. Zool.* i. 442. *Mont. Dict. & Supp.*—E. Montana. *Gmel.* i. 867. *Lath. Ind. Orn.* i. 398.—Mountain Bunting. *Lath. Syn.* iii. 165. *Br. Zool.* i. 445. *Mont. Dict. & Supp.*

These birds were abundant in Hare Island on the west coast of Greenland, lat. 70° 26′, in the month of June, and were breeding there. We also saw them on the western coast of Davis's Straits, about the same latitude, in September. Fabricius has well described their nest as formed externally of grass, next of feathers, and lined with the hair of foxes. Eggs four or five, dirty white, spotted with ash-colour and yellowish brown; the nests are placed in ledges of the rocks. The song of the male bird was noticed frequently. Notwithstanding the deference which is due to the general accuracy of Montagu, I have ventured to place the Snow, Tawny and Mountain Buntings together, believing them to be the same species in different states of plumage, the effects of age, sex, or climate. Those seen at Hare Island exactly correspond to the Snow Bunting of Montagu, and those on the opposite coast to the Tawny Bunting.

6. SYLVIA OENANTHE. *Wheatear.*

Motacilla Oenanthe. *Gmel.* i. 966. *Faun. Suec.* 93. *Fabr.* 122. *Brün. nos.* 245 & 246. *Müll. no.* 274.—S. Oenanthe. *Lath. Ind. Orn.* ii. 529. *Temm.* 135.—Wheatear. *Lath. Syn.* iv. 465. & *Supp.* 182. *Br. Zool.* i. 521. *Arct. Zool.* ii. 420. *Mont. Dict. & Supp.*

This species was not seen on the shores of Greenland on which we landed: but on our return homewards in October, off Cape Farewell, a few were seen at a distance from the land, doubtless on their passage southward. In our outward voyage, in May, we also met with them in lat. 60° N. and long. 13° W., then most probably migrating northward.

7. TRINGA MARITIMA. *Purple Sandpiper.*

T. Maritima. *Gmel.* i. 678. *Lath. Ind. Orn.* ii. 731. *Brün. no.* 182. *Müll. no.* 206. —Selninger Sandpiper. *Arct. Zool.* ii. 480. *Lath. Syn.* v. 173. & *2d Supp.* 312. *Br. Zool.* ii. 80.—T. Striata. *Gmel.* i. 672. *Lath. Ind. Orn.* ii. 733. *Fabr.* 107.—Striated Sandpiper. *Arct. Zool.* ii. 472. *Lath. Syn.* v. 176.—Sea Sandpiper. *Markwick in Linn. Trans.* iv. 22.—T. Nigricans. *Montagu in Linn. Trans.* iv. 40.—Purple Sandpiper. *Mont. Dict. & Supp.*

Fabricius was the first naturalist who knew this bird to be the same in all its changes of plumage; he called it *T. Striata*; but it being now more generally known as *T. Maritima*, I have given it that name, being what it is usually called when in its summer dress: the specimens killed at Hare Island in June, and at Possession Bay on the 1st of September, were in this plumage. In its winter state it has been called the *T. Striata*, or Striated Sandpiper. As a British bird it has been described only in the latter plumage, and it is the Sea Sandpiper of Mr. Markwick, the Purple Sandpiper and *Tringa Nigricans* of Montagu. Temminck does not notice it in his *Manuel*. The Greenland specimens have been compared with two in my brother's cabinet of British birds, the latter having been killed in winter: the difference of the plumage of the two seasons consists in the under parts during summer having less of dusky and more of white; and the feathers of the back and scapulars being of a much deeper and richer colour, and beautifully marked with broad white edgings: a similar marking is observable, but not so distinctly, on the back of the head and

and neck; there is also a little dash of ferruginous occasionally interspersed on the upper plumage. This species was found in flocks of six and eight on a shingly beach.

8. TRINGA CINEREA. *Knot* or *Red Sandpiper.*

T. Cinerea. *Temm.* 404.

SUMMER. T. Islandica. *Gmel.* i. 682. *Lath. Ind. Orn.* ii. 737.—T. Ferruginea. *Brün. no.* 180. *Müll. no.* 203.—Red Sandpiper. *Arct. Zool.* ii. 476. *Mont. Dict. & App. Lath. Syn.* v. 186. *Br. Zool.* ii. 89.

WINTER. T. Cinerea. *Gmel.* i. 673. *Lath. Ind. Orn.* ii. 733. *Brun. no.* 179. *Mull. no.* 202.—Ash-coloured Sandpiper. *Lath. Syn.* v. 177. *Br. Zool.* ii. 78. *Arct. Zool.* ii. 474. *Mont. Dict. & Supp. Wil. Am. Orn.* vii. 36.—T. Grisea. *Gmel.* i. 681. *Lath. Ind. Orn.* ii. 733.—Grizzled Sandpiper. *Lath. Syn.* v. 175.—T. Canutus. *Gmel.* i. 679. *Lath. Ind. Orn.* ii. 738. *Faun. Suec.* 65.—Knot. *Lath. Syn.* v. 187. *Br. Zool.* ii. 76. *Arct. Zool.* ii. 473. *Mont. Dict. & Supp.*

BIRDS OF ONE YEAR. T. Calidris. *Gmel.* i. 681. *Lath. Ind. Orn.* ii. 732. —Dusky Sandpiper. *Lath. Syn.* v. 174. *Mont. App.*—T. Nævia. *Gmel.* i. 681. *Lath. Ind. Orn.* ii. 732.—Freckled Sandpiper. *Arct. Zool.* ii. 480. *Lath. Syn.* v. 174.—T. Australis. *Gmel.* i. 679. *Lath. Ind. Orn.* ii. 737.—Southern Sandpiper. *Lath. Syn.* v. 187. *& Supp.* 249.—Aberdeen Sandpiper. *Br. Zool.* ii. 89.

Killed at Hare Island in June. It is probably a rare species in Greenland, being unknown to Fabricius. Its various stages of plumage have been correctly described by Montagu in his *Appendix*, article "Dusky Sandpiper," and by Temminck in his *Manuel:* they had been previously involved in much obscurity, and had given rise to the variety of synonyms which are referred to. In its winter state it is the *T. Canutus*, or Knot: in its progress to the summer state it becomes first the *T. Grisea*, or Grizzled, then the *T. Cinerea* or Ash-coloured Sandpiper: the old birds in summer are the *T. Islandica* and *T. Ferruginea*, and Red Sandpiper: the birds of the first year, not attaining the high colour of the old ones, have been described variously; as the *T. Calidris* or Dusky, *T. Nævia* or Freckled, *T. Australis* or Southern, and the Aberdeen Sandpiper.

9. TRINGA ALPINA. *Dunlin.*

T. Variabilis. *Temm.* 395.

SUMMER. T. Alpina. *Gmel.* i. 676. *Lath. Ind. Orn.* ii. 736. *Brün. no.* 173. *Mull. no.* 197. *Faun. Suec.* 64. *Fabr.* 111.—Dunlin. *Lath. Syn.* v. 185. & *Supp.* 249. *Arct. Zool.* ii. 476. *Mont. Dict. Supp.* & *App. Br. Zool.* ii. 92.—Red-backed Sandpiper. *Wil. Am. Orn.* vii. 25.

WINTER. T. Cinclus. *Gmel.* i. 680. *Lath. Ind. Orn.* ii. 735.—Purre. *Arct. Zool.* ii. 475. *Lath. Syn.* v. 182. *Br. Zool.* 294. *Wil. Am. Orn.* vii. 39. *Mont. Dict.*

Only a single specimen was killed. The bird is said by Fabricius to be very rare in Greenland. The fact of the *Tringa Cinclus* and *Alpina* being the same bird may be considered as established, the former in the winter and the latter in the summer plumage: for this discovery Europeans are indebted to our countryman Montagu. Even the acute and accurate Temminck has not arrived at clearness on this point in his *Manuel*, though he concludes the *T. Cinclus* as referable to the *Alpina* (his *Variabilis*) in some state. It must not be overlooked, however, that before Montagu had published his discovery, the close practical observation of Wilson the ornithologist of America, had put him in possession of the fact also.

These birds must certainly migrate from the arctic regions in the winter; since neither Brünnich, Müller, Fabricius, nor the *Fauna Suecica* make any mention of the *Tringa Cinclus*.

10. CHARADRIUS HIATICULA. *Ringed Plover.*

C. Hiaticula. *Gmel.* i. 683. *Lath. Ind. Orn.* ii. 743. *Müll. no.* 209. *Brün. no.* 184. *Fabr.* 112. *Faun. Suec.* 66.—Ringed Plover. *Lath. Syn.* v. 201. *Arct. Zool.* ii. 485. *Br. Zool.* ii. 105. *Mont. Dict.* & *Supp. Wil. Am. Orn.* 765.

Killed at Hare Island in June: perfectly agreeing with Montagu's description of British specimens; from whence it may be inferred that the remark made by Pennant of the black collar becoming

coming fainter in North America, from the effect of climate, is not correct. Montagu mentions that he has seen several of these birds which had been killed in England, in which the collar was extinct.

11. PHALAROPUS HYPERBOREUS. *Red Phalarope.*

P. Hyperboreus. *Temm.* 457. *Lath. Ind. Orn.* ii. 775.—Tringa Hyperborea. *Gmel.* i. 675. *Müll. no.* 196.—Tringa Lobata. *Fabr.* 109. *Faun. Suec.* 64.—Red Phalarope. *Lath. Syn.* v. 270 & 271. *Br. Zool.* ii. 125. *Arct. Zool.* ii. 494. *Mont. Dict. Supp. & App. Wil. Am. Orn.* ix. 75.

IMMATURE. Phalaropus Fuscus. *Lath. Ind. Orn.* ii. 776.—Tringa Fusca. *Gmel.* i. 675.—Tringa Lobata. *Brün. no.* 171.—Brown Phalarope. *Lath. Syn.* v. 274. *Arct. Zool.* ii. 495.

A small flock of these birds were met with on the west coast of Greenland, in latitude 71°, in June. A considerable variation takes place in the ferruginous colouring of the sides of the neck, in some instances the colour meets at the breast, and in others it does not; it has been considered that this difference is characteristic of the sex, but I am inclined to think that such opinion is erroneous. Some authors have supposed the *Tringa Fulicaria* of Linneus's *Systema Naturæ* and of Brünnich to be the female of this species, and have consequently described it as differing extremely: but I have had no hesitation in placing the *Tringa Fulicaria* as a synonym of the true *Tringa Lobata* (not the *T. Lobata* of Fabricius, which is the present bird). The *Phalaropus Fuscus* with its synonyms is considered as the immature bird, on the authority of Temminck and the *Fauna Suecica*; but great confusion has been made in the synonyms referred to by other writers. I am not acquainted with the winter plumage of this species; but think it probable that the ferruginous tints are peculiar to the summer months, as the specimens killed in June were very irregularly and uncertainly marked.

12. PHA-

12. PHALAROPUS PLATYRYNCHOS. *Flat-billed Phalarope.*

Phalaropus Platyrynchos. *Temm.* 459.

SUMMER. Tringa Fulicaria. *Linn. Syst. Nat. ed.* xii. *vol.* i. 249. *Brün. no.* 172. *Fabr.* 111. *Müll. no.* 196.—Tringa Hyperborea, *var.* β. *Gmel.* i. 676.—Red Phalarope female. *Lath. Syn.* v. 271.

WINTER. Phalaropus Lobatus. *Lath. Ind. Orn.* ii. 776.—Tringa Lobata. *Gmel.* i. 674. *Müll. no.* 195.—Grey Phalarope. *Br. Zool.* ii. 123. *Lath. Syn.* v. 272. *Arct. Zool.* ii. 494. *Mont. Dict.*—Grey Phalarope. *Wil. Am. Orn.* ix. 72.

IN CHANGE. Phalaropus Glacialis. *Lath. Ind. Orn.* ii. 776.—Tringa Glacialis. *Gmel.* i. 675.—Plain Phalarope. *Lath. Syn.* v. 273. *Arct. Zool.* ii. 495.—Grey Phalarope. *Mont. App.*

YOUNG. Tringa Lobata, var. β. *Gmel.* i. 674.

However unwilling I feel to admit alterations in names, I am induced to do so in the present instance, and to adopt Temminck's specific appellation, both as appropriate, and distinct from the confusion in which the various other synonyms which are referred to are involved. The specimen from which the account is taken was killed on the 10th of June, out of a flock of four, on the west coast of Greenland, in latitude 68°. They were swimming in the sea, amongst icebergs three or four miles from the shore. From the considerable difference between the summer and winter plumage of this bird, it is not surprising that so many mistakes have been made. My specimen, which was a male, agrees with Temminck's description of the full-plumaged bird in summer, except that the whole under parts have a considerable quantity of white mixed with the brick red, the white being rather predominant. Before I had an opportunity of consulting the *Manuel d'Ornithologie*, which confirmed my opinion, I had arrived at the conclusion that the *Tringa Fulicaria* of Brünnich was this bird: his accurate description of the bill left no doubt in my mind, notwithstanding the difference in the plumage, the consequence of season. Fabricius enumerates the *Tringa Fulicaria* in

in his *Fauna Groelandica;* but the bird itself does not appear to have fallen under his notice: he was aware, however, that it could not be referred to his *Tringa Lobata*. This species is only known to British naturalists in its winter state.

13. Alca Alle. *Little Auk.*

A. Alle. *Gmel.* i. 554. *Lath. Ind. Orn.* ii. 795. *Brün. no.* 106. *Fabr.* 84. *Faun. Suec.* 50. *Mull. no.* 142.—Little Auk. *Lath. Syn.* v. 327. *Arct. Zool.* ii. 512. *Mont. Dict. & Supp. Br. Zool.* ii. 158. *Wil. Am. Orn.* ix. 94.—Uria Alle. *Temm.* 611.

This species was abundant in Baffin's Bay and Davis's Straits; and in latitude 76° was so numerous in the channels of water separating fields of ice, that many hundreds were killed daily, and the ship's company supplied with them. The whole of the birds in the breeding season (the sexes being alike) had the under part of the neck an uniform sooty black, terminating abruptly and in an even line against the white of the belly; the young birds, which we saw in all stages from the egg, as soon as they were feathered were marked exactly as the mature birds: but in the third week of September, when we were on our passage down the American coast, every specimen, whether old or young, was observed to be in change; and in the course of a few days the entire feathers of the throat and cheeks and of the under part of the neck had become white; this latter state has been erroneously considered by some authors as that of the immature bird. It has been correctly described however by Fabricius as the winter plumage. Montagu arrived at the same conclusion in his *Supplement*. We saw neither of the varieties which Fabricius remarks that he had heard of; namely, a red-breasted variety, and one wholly white.

14. Uria

14. URIA BRÜNNICHII. *Brünnich's Guillemot.*

Uria Troille. *Brün. no.* 109.

Until the last autumn this bird was known to naturalists on the authority alone of Brünnich; who, in his *Ornithologia Borealis* having described the species at present denominated the *Uria Troile*, under the specific name of *Lomvia*, proceeds to notice the existence of a second species much resembling it, and which he names the *Uria Troile*: this second species is the present bird. Linnæus originally called the first bird *Alca Lomvia* in his *Systema Naturæ*, edit. 10. (1758) vol. i. 130; but in the second edition of his *Fauna Suecica* (1761), he named it *Troile*. Brünnich in 1764 took up the specific appellation of *Lomvia* from the *Systema Naturæ*, adding the description he found given of it in the *Fauna Suecica* under the name of *Troile*, and applied *Troile* to his new bird, referring, however, to the *Fauna Suecica* probably as authority for the name. From this confusion I apprehend it has arisen that both these birds have not since Brünnich published his work been noticed by general authors as distinct species. Dr. Leach on examining this bird ascertained it to be a distinct species; and not being aware that it had been previously distinguished and described by Brünnich, exhibited it at the Linnean Society as a new species, under the name of *Uria Francsii* in compliment to Mr. Frederick Franks, whom he then supposed to have been the person by whom it had been first killed. I have already had occasion, when speaking of the *Phalaropus Platyrynchos*, to remark the accuracy in observation of Brünnich. It is but justice to attach his name to a species of which his claim to priority of knowledge and of communication is unquestionable. Latham (*Synopsis* vi. 330) notices this bird of Brünnich's, but considers it a variety of the Foolish Guillemot.

The *Uria Brünnichii* was found in abundance in Davis's Straits, and

and occasionally in Baffin's Bay. A specimen killed on the 10th of June had the feathers of the throat mottled with white; from whence I infer that it undergoes the same changes from season as the *Uria Troile*. A matured specimen was sent by me to my brother, and reached England towards the close of the summer; several were subsequently brought home by the expedition which visited Spitzbergen, as well as by that which went to Baffin's Bay.

It is extraordinary that a species so abundant in the Greenland seas should be unnoticed by Fabricius; it must have escaped his observation altogether, as he has not even mentioned the *Uria Troile*, for which it might on a slight view be mistaken. Length 17 inches—extent 2 feet—weight 2lb. 6oz.; inside of the throat yellow, irides dark; throat and neck sooty brown; head black; hind head, hind neck, back and wings, dark sooty brown; the wings being lightest, and the secondaries tipt white; the feathers of the head and neck have a peculiar smoothness and softness; from the eye to the hind head is a line occasioned by a division of the feathers; belly and all beneath pure white, running up to a point in the neck; the feathers are very thick, and on being removed a dark down appears between them and the skin; legs marbled, brown and yellowish; claws black; no difference in plumage between the sexes. With the exception of the colour of the dark plumage, this description might be applied to the Foolish Guillemot; but the specific distinction is well pointed out by Brünnich in the following words: "Lomviæ in omnibus simillima, excepto rostro latiori et breviori, cujus margines etiam in exsiccatis exuviis flavescunt." The yellow margin extends from the corner of the mouth, along the edge of the upper mandible, to the point to which the feathers project on the bill: it is rather horn-coloured than yellow. Brünnich mentions three other birds,

Nos. 110, 111 and 112, which he calls Svarbag, Ringvia and Alga; the two former Iceland and the latter Danish birds: he is undetermined whether these be distinct species, or the present in different states of plumage: I am inclined to consider the latter supposition as the correct one.

It will be necessary to make some alteration in the specific character of *Uria Troile*, as given in Gmelin and Latham, to distinguish it from *Uria Brünnichii*. It is therefore proposed to describe the two species as follows:

U. Troile. U. corpore fusco, pectore abdomineque niveo, remigibus secundariis apice albis, rostro longitudine capitis: mandibula superiore quadruplo longiore quam lata.

U. Brünnichii. U. corpore fuliginoso, pectore abdomineque niveo, remigibus secundariis apice albis, rostro capite breviore: mandibula superiore triplo longiore quam lata.

15. URIA GRYLLE. *Black Guillemot.*

U. Grylle. *Temm.* 608. *Fabr.* 92.—Black Guillemot. *Br. Zool.* ii. 163. *Mont. Dict. & Supp. Lath. Syn.* vi. 332. & *Supp.* 265.

MATURE WINTER. U. Grylloides. *Brün. no.* 114.—U. Balthica. *Brün. nos.* 115 & 116.

MATURE SUMMER. U. Grylle. *Brün. no.* 113. *Lath. Ind. Orn.* ii. 797.—Colymbus Grylle. *Gmel.* 584. *Faun. Suec.* 52.—Colymbus Gryllus. *Müll. no.* 151.—Black Guillemot. *Arct. Zool.* ii. 516.

The states of plumage of this bird are clearly described from the extensive and accurate observation of Fabricius. The young, when just feathered, are spotted black and white beneath, but otherwise resemble the parents. On the approach of winter the whole become varied with black and white; the feathers of the back margined with white; the head, throat and breast, white lightly spotted with black, the wings continuing black, and the speculum

speculum white. In this state it has been described by Brünnich as the *Uria Balthica*, No. 115. In *mature* winter plumage the whole bird is more or less speckled, and the upper feathers of the wing spot become tipt with black, giving it a mottled appearance. It is then the *Uria Balthica*, No. 116, of Brünnich. A male specimen, killed in November at Shetland, having the wing spot mottled, shows that this circumstance is not peculiar to the females, as has been supposed. In the spring the plumage gradually reassumes the black. A male killed in Davis's Straits early in June, had the whole head and neck mottled with black and white, equally distributed; the plumage beneath and the back being black with a few white feathers dispersed; the lower part of the abdomen gray as in the neck; the speculum still mottled, but with the white predominating. This bird was killed on our first arrival in the Greenland seas; and it is presumed that the change to full summer plumage was proceeding very rapidly, as we did not afterwards see a mottled bird. The legs of the November and June specimens were red, though not so bright as in summer. The breeding plumage is too well known to need description.

We did not see a variety, unless a specimen killed in September having the primaries rusty brown instead of black may be considered such: the varieties which are noticed by Gmelin, and also by Latham in the *Index Ornithologicus* and in the *Synopsis*, and which are supposed to be found in different places, are referable to the changes of plumage which this bird undergoes during the winter.

16. COLYMBUS SEPTENTRIONALIS. *Red-throated Diver.*

C. Septentrionalis. *Fabr.* 95. *Temm.* 602.

MATURE. C. Septentrionalis. *Gmel.* i. 586. *Lath. Ind. Orn.* ii. 801. *Müll. no.* 153.—C. Lumme. *Brün. no.* 132.—Red-throated Diver. *Lath. Syn.* vi. 344. *Arct. Zool.* ii. 520. *Br. Zool.* ii. 169. *Mont. Dict. Supp. & App.*

BIRDS OF THE FIRST YEAR. C. Stellatus. *Gmel.* i. 587. *Lath. Ind. Orn.* ii. 800. *Brün. no.* 130. *Müll. no.* 159.—Speckled Diver. *Lath. Syn.* vi. 341. *Br. Zool.* ii. 168. *Arct. Zool.* ii. 519. *Mont. Dict. & Supp.*

BIRDS OF THE SECOND YEAR. C. Striatus. *Gmel.* i. 586. *Lath. Ind. Orn.* ii. 802.—C. Borealis. *Brün. no.* 131. *Lath. Ind. Orn.* ii. 801.—Striped Diver. *Arct. Zool.* ii. 519. *Lath. Syn.* vi. 345.

Killed June 30, on the west coast of Greenland, in lat. 71°. The rich chesnut marking on the throat is conical in shape, having the apex, which is sharply pointed, at the throat, and the base resting on the white of the breast; the back of the specimen is slightly sprinkled with white spots, showing that it is a bird of the third or fourth year. Following Temminck, the *Colymbus Stellatus* and *Striatus*, with their synonyms, are here introduced as the immature birds of the present species: Fabricius was aware of the change of plumage, and has described the mature bird well; but no author before Temminck appears to have supposed that the Striped and Speckled Divers were referable to this species.

17. STERNA HIRUNDO. *Common Tern.*

S. Hirundo. *Gmel.* i. 606. *Lath. Ind. Orn.* ii. 807. *Fabr.* 105. *Müll. no.* 170. *Faun. Suec.* 55. *Temm.* 481.—S. Paradisæa. *Brün. no.* 152.—Great Tern. *Wil. Am. Orn.* vii. 76.—Common Tern. *Br. Zool.* ii. 196. *Mont. Dict. & Supp.*

IMMATURE. S. Hirundo. *Brün. no.* 151.—Common Tern. *Lath. Syn.* vi. 361. Great Tern. *Arct. Zool.* ii. 524.

Abundant on the coast of Greenland. In the accounts of the authors who have been cited, a difference is observable in the description of the colour of the forehead of this species: by some it is represented as white, and by others as black: the specimens which

which were obtained, and which were very numerous, were all of the latter plumage, which is certainly that of the perfect adult bird. The white feathers on the forehead are found only on young birds of the first year considerably advanced towards maturity. In a still younger state it is supposed to be the *S. obscura* or Brown Tern of Gmelin and Latham, and perhaps also the *S. nigra* of the *Fauna Suecica*, Müller and Brünnich. There is a remarkable difference between the Greenland common Terns and those of the European coasts, in their bills and legs; the bills of the Greenland birds are one-third shorter than the European ones, and the tarsi of the former are only half the length of the latter.

18. LARUS MARINUS. *Great Black-backed Gull.*

L. Marinus. *Fabr.* 102. *Temm.* 490.

MATURE. L. Marinus. *Gmel.* i. 598. *Lath. Ind. Orn.* ii. 813. *Brün. no.* 145. *Faun. Suec.* 55. *Müll. no.* 163.—Black-backed Gull. *Lath. Syn.* vi. 371. *Br. Zool.* ii. 172. *Arct. Zool.* ii. 527.—Great Black-backed Gull. *Mont. Dict. & App.*

IMMATURE. L. Nævius. *Gmel.* i. 598.—Wagel. *Lath. Syn.* vi. 375. *Br. Zool.* ii. 182. *Arct. Zool.* ii. 528.

The largest of the known Gulls. This bird was once, and once only, seen from the ships, when they were high up in Baffin's Bay, but at a distance too great to obtain a specimen. It was known to Fabricius both in its mature and immature plumage; but he was probably mistaken in considering the *L. varius* of Brünnich as a synonym of the young bird: that from its size is probably an immature Herring Gull. The *L. marinus* is too well known to need a particular description.

19. LARUS GLAUCUS. *Glaucous Gull.*

L. Glaucus. *Gmel.* i. 600. *Fabr.* 100. *Brün. no.* 148. *Müll. no.* 169. *Lath. Ind. Orn.* ii. 814.—Glaucous Gull. *Lath. Syn.* vi. 374. *Arct. Zool.* ii. 532. & *Supp.* 70.

Notwithstanding the confusion in which the larger species of Gulls

Gulls are involved, there appears no doubt of the application of all the above references to the species now under description. The *L. glaucus* of Temminck is not quoted, because, as will be hereafter shown, it is a different species.

None but mature birds in the perfect summer state were killed during the voyage, but these were very common throughout Davis's Straits and Baffin's Bay. I am fortunately able to make the history of its plumage complete from specimens in my brother's collection of British birds; and I am happy thus incidentally to record it for the first time as an addition to British ornithology.

In immature plumage it is mottled throughout with an uniform light-brown and white, being distinguished from the young of other well-described species by being without the darker marks on the wings and tail: during the first year the bill has the upper mandible less arched, the angular projection of the lower mandible not so defined, and the extremities of both lead-coloured. In winter the mature bird has the head and neck mottled with brown, as is usual with all the white-headed Gulls. In the perfect summer state, the whole plumage is white excepting the back, scapulars, and wing-coverts, which are a very light ash-colour; the primary quill-feathers are still lighter, the ends and under part being pure white; there is no black whatsoever on any part of the plumage: hence the bird from Hudson's Bay, described in Latham's *Synopsis* at the page referred to above, with six of the primary quill-feathers black at the ends, must have been another species.

When arrived at maturity the bill is three inches in length, of a lightish horn-colour, the angular projection of the lower mandible being bright red; orbits naked, straw-coloured and very fierce; legs and feet a livid flesh-colour. In size it is somewhat inferior to the *L. marinus;* the bill, tarsus, and body of the latter being decidedly greater. Length of a male specimen twenty-nine inches

inches and a half. Extent sixty-three inches. Weight 4 lb. 8 oz. Length of the tarsus two inches seven-eighths: the females averaged rather less. Temminck (*Manuel*, p. 490, note) appears to have seen an immature specimen of this bird, to which he was disposed to give the name of *L. giganteus:* this name would not be a correct one, because it is a smaller bird than the *L. marinus*. Temminck identifies his specimen with the *L. Ictyætos* of Pallas, but that bird is a black-headed Gull.

The *Larus glaucus* is unquestionably the Burgomaster Gull of the Dutch, and preys on smaller birds as well as on fish. One specimen which was killed disgorged a little Auk when it was struck, and proved on dissection to have a second in its stomach.

I am indebted to Mr. James Ross, a midshipman of the Isabella, (one of the Discovery ships,) for a singular specimen of a Gull which, though differing in several points, I conceive must be placed under this species: it was shot on the 6th of June near the middle of Davis's Straits. Its description is as follows:

Length twenty-six inches; extent fifty-eight inches; a male bird; plumage wholly white, the feathers of the hind head, neck, back and wings being occasionally tinged with a very faint brownish hue; the legs and feet flesh-coloured; length of the tarsus two inches and a half; irides deep brown; the length of the bill from the corner of the mouth two inches and a half, being full half an inch shorter than in the usual specimens of the *Larus glaucus*; the bill is a yellowish horn-colour, the ends of both mandibles being a lead-colour. From the colour of the bill and the faint spots on the feathers, this bird was evidently immature; and it may reasonably be presumed that its full plumage would have been entirely white. In this, and in its smaller size, it differs strongly from the Glaucous Gull; both of these circumstances, I conjecture,

conjecture, may have been caused by sickness or by scanty supply of food.

20. LARUS ARGENTATUS. *Silvery Gull.*

The bird now under consideration does not appear to have been described in any of the books which are referred to in this memoir. It is necessary therefore to explain why the name of *argentatus* or silvery, which has been used before, has been attached to it. A *Larus argentatus* was introduced by Brünnich, who was followed by Gmelin; but the bird to which the name was applied is evidently the *Larus fuscus* or Herring Gull of Latham, in winter plumage: as is also the Silvery Gull of the *Arctic Zoology* and of Latham's *Synopsis*. In this opinion Temminck concurs, as is shown by his quotations in his *Manuel* under the head of *Larus glaucus*. Latham in the *Index Ornithologicus* takes up the *Larus argentatus* of Brünnich, but considers it erroneously as an aged bird of the *Larus marinus* or Great Black-backed Gull. Montagu finding the term *argentatus* at liberty, applied it in his *Dictionary* to his Less Black-backed Gull; but it will be seen by reference to the *Manuel* of Temminck that the Less Black-backed Gull is the *Larus fuscus* of Linneus and Gmelin.

I apprehend that the reason why the bird under consideration has not been hitherto distinctly described is to be found in its general resemblance to the *Larus glaucus:* it will be therefore best distinguished by a comparative description. In the general character of the plumage they are alike, differing from the other large species of this genus in the entire absence of black in the primary quill-feathers; the shade of the ash-colour of the back, scapulars, and coverts, varies in different specimens from almost the lightest perceptible tint to a darker than the darkest *Larus glaucus* that was killed on the voyage; the principal distinction between

between the two species is in the difference of size; the males of this species average twenty-four inches in length, and the females rather less: extent four feet five to four feet six inches: the legs and bill of both are alike, except in size: length of the tarsus two inches and a half; the wings of the *argentatus* are rather longer in proportion than those of the *glaucus*.

These birds were abundant in Davis's Straits and Baffin's Bay, but were only seen in mature summer plumage: from analogy it may be expected that the immature birds will resemble those of the Glaucous Gull.

I should have been disposed to have considered this bird as a new and undescribed species; but in a personal communication with Mr. Temminck, whose extensive skill and judgement in ornithology are only equalled by the liberality and kindness with which he communicates his knowledge, I have learned that he considers the bird of Greenland to be specifically the same with the Herring Gull of the more southern shores of Europe; but that from the effect of climate the black markings of the primary quill-feathers, which have been hitherto considered an essential characteristic of the species, are changed to white in the arctic countries. The mature summer birds of Greenland (in which state only I have seen them) certainly strongly resemble our Herring Gull in all other points. In deference therefore to such high authority, I add the synonyms of the authors I quote belonging to that bird, as it is found in temperate climates.

L. Fuscus. *Lath. Ind. Orn.* ii. 815. *Müll. no.* 164. *Faun. Suec.* 54.—L. Glaucus. *Temm.* 493.—Herring Gull. *Lath. Syn.* vi. 372. *Br. Zool.* ii. 181. *Mont. Dict. & Supp.*

MATURE WINTER. L. Argentatus. *Gmel.* i. 600. *Brün. no.* 149.—Silvery Gull. *Lath. Syn.* vi. 375. *Arct. Zool.* ii. 533.

MATURE SUMMER. L. Fuscus. *Gmel.* i. 599. *Brün. no.* 142.—Herring Gull. *Arct. Zool.* ii. 527.

IMMATURE. L. Varius. *Brün. no.* 150.—Wagel. *Arct. Zool. Supp.* 70.

Before I had the pleasure of meeting with Mr. Temminck, he had designed to give the specific name of *argentatus* to the European bird; it will therefore remain as I have placed it at the head of this species: the name of *glaucus*, which in his *Manuel* was given to the Herring Gull, will be removed by him to the true Glaucous Gull. It is singular that Pennant, in his *Arctic Zoology*, under the head of Herring Gull, states that bird to be common in Greenland throughout the year; though no other writer, as far as my observation has extended, mentions the circumstance, and we did not observe a single one with black primary quill-feathers during our voyage in the Straits.

21. LARUS EBURNEUS. *Ivory Gull.*

L. Eburneus. *Gmel.* i. 596. *Lath. Ind. Orn.* ii. 816. *Temm.* 498.—Ivory Gull. *Lath. Syn.* vi. 377. *Arct. Zool.* ii. 529. & *Supp.* 70.—L. Candidus. *Fabr.* 103. *Müll.* p. viii.

Abundant in Baffin's Bay. Authors describe the length of this bird as sixteen or seventeen inches; the matured specimens obtained, averaged twenty inches; but an immature one measured an inch less. Weight about twenty ounces. Nothing can exceed the beauty of the delicate snow-white plumage of this species in its maturity: I apprehend that this takes place at the end of the second year; on the 24th of August the young birds were observed in flight, much mottled with brown about the head, and probably also about the wings, though not so visibly. A specimen killed the first week in June, of a bird apparently of the preceding year, has a few light-brown feathers about the bill, extending towards the eyes, a very small transverse band of brown spots across the primary wing coverts, thickest at the point of the wing; the primary quill and the tail feathers slightly tipped with brown. Since my return I have seen a specimen of an immature bird with the ends of the primary quill-feathers and of the tail-

feathers

feathers tipped with brown: the bill of the immature bird has the extremity yellow as in the mature bird. The wings of this species extend an inch and a half beyond the tail: the legs are black, and the skin very rough; they are feathered within a very short distance of the knee: length of the tarsus only one inch and a half; the claws are much hooked: irides dark brown in every specimen: the legs and bill of the mature birds agreed in colour with the descriptions of the authors quoted; the hind claw is sufficiently conspicuous, though Fabricius says not. These birds are attracted in considerable numbers by whale blubber, and are therefore usually found in company with the *Procellaria glacialis*; they are easily killed, being by no means shy.

22. LARUS TRIDACTYLUS. *Kittiwake Gull.*

L. Tridactylus. *Temm.* 502.—Kittiwake. *Mont. Dict. & Supp.*

MATURE SUMMER. L. Tridactylus. *Lath. Ind. Orn.* ii. 817. *Fabr.* 98.—Kittiwake. *Lath. Syn.* vi. 393. *Br. Zool.* ii. 186.—L. Rissa. *Gmel.* i. 594. *Arct. Zool. Supp.* 70. *Brün. no.* 140. *Müll. no.* 160.

MATURE WINTER. Kittiwake. *Arct. Zool.* ii. 529. *& Supp.* 70.

IMMATURE. L. Tridactylus. *Gmel.* i. 595. *Müll. no.* 161. *Faun. Succ.* 55.—L. Tridactylus. β. *Lath. Ind. Orn.* ii. 817.—Tarrock Gull. *Mont. Dict. & Supp. Lath. Syn.* vi. 392. *& Supp.* 268. *Br. Zool.* ii. 187. *Arct. Zool.* ii. 533. *& Supp.* 70.

It is expedient to distinguish the different states of plumage of this bird, in reference to the authors quoted. Temminck is the first writer who appears to have had a full knowledge of the changes it undergoes. The mature summer plumage is wholly white, with the exception of the back and wings; these are of a deep ash-colour: the black markings of the primary quill feathers have been correctly described by Temminck. In the autumn, the white at the back of the head and neck is changed into a light ash-colour, which is rather deepest behind the ear, forming the appearance of a spot: the small feathers under the eye are

also rayed with black. The young birds when full grown have this autumnal appearance with additional differences correctly described in the *Fauna Suecica*; the bill is black instead of yellow; at the back of the neck the feathers are tipt black, forming a narrow crescent-shaped patch; the wing coverts are tipt black, forming a bar across the wings; primary quills black, with more or less of the inner webs in different specimens white: tail tipt for half an inch with black, except the outer feather on each side, the second having only a spot on the inner web. It is worthy of observation that the outer tail feathers are somewhat longer than the inner ones, giving the tail an appearance of being slightly forked; this is more perceptible in the young birds than in the old ones.

The specific name of *tridactylus* (though given by Linneus to the immature bird) appears preferable, as being more appropriate than that of *Rissa:* it is therefore adopted. I am inclined to suppose that this species attains maturity at the age of one year. In June none were seen with spotted plumage; early in October several immature birds were killed, being marked as above described: the specimens noticed by Montagu as killed in the month of March, and supposed by him to be in complete plumage, had evidently not got rid of all the black markings on the wing coverts, which I believe would have taken place, had they lived a few weeks longer.

The *L. tridactylus* of Gmelin and Müller, and the Tarrock Gull of the *Arctic Zoology*, are the young bird after it has lost the black bar upon the wing, and before the colour has disappeared from the neck and from the tips of the tail-feathers. It is apprehended that the *Larus cinerarius* of Fabricius is the *tridactylus* in winter plumage: its rarity in Greenland, as noticed by him, may be accounted for by the probability that most of these Gulls migrate southwards during that season.

23. LARUS

23. LARUS SABINI. *Forked-tailed Gull.*

A full description of this bird having been already presented to the Society*, it is unnecessary to repeat the account.

Mr. Temminck informs me that he has seen this bird in the Museum at Vienna, where it was proposed to call it *Larus collaris*, but that it has not been described by the ornithologists of that capital, or by any author whatsoever before the Memoir above referred to was presented to the Society. The specimen, he thinks, was obtained from Professor Giesecké ; but the bird is not to be found in a MS. list of Greenland birds in his own hand-writing, with the sight of which I have been favoured by Mr. Bullock, nor is any other Gull there mentioned with which it could possibly have been confounded.

24. LESTRIS PARASITICUS.

Catharacta Parasitica. *Fabr.* 103.

MATURE. Larus Parasiticus. *Gmel.* ii. 601. *Lath. Ind. Orn.* ii. 819. *Faun. Suec.* 55. *Müll. no.* 166. *Temm.* 512.—Arctic Gull. *Br. Zool.* ii. 179. *Arct. Zool.* ii. 530. *Lath. Syn.* vi. 389. *Mont. Dict. & Supp.*—Catharacta Parasitica. *Brün. no.* 127.

IN BROWN PLUMAGE. Catharacta Coprotheres. *Brün. no.* 128.

IMMATURE. Lestris Crepidatus. *Temm.* 515.—Larus Crepidatus. *Gmel.* ii. 602. *Lath. Ind. Orn.* ii. 819.—Black-toed Gull. *Br. Zool.* ii. 178. *Arct. Zool.* ii. 531. *Lath. Syn.* vi. 387. *Supp.* 268. *Mont. Dict. & Supp.*—Larus Cepphus. *Müll. no.* 168. —Catharacta Cepphus. *Brün. no.* 126.

I have followed the example of Temminck in removing this with the other dark-coloured Gulls from *Larus* and giving them the generic appellation of *Lestris*. Much inaccuracy as well as difference of opinion has existed respecting not only the immature, but the mature birds of this species. The immature bird has been described as a distinct species. Montagu was the first author who had a doubt of the correctness of this arrangement, but he erred in considering the young bird as a variety only. It has been

* See page 520 of this volume.

called

called by the different names cited above, during the first year of its existence, when its tail is destitute of the long feathers, and its whole plumage is marked with transverse bars of light-brown and dingy white. The markings do not entirely leave it in the second year, but are perceptible in the under parts of the wings and in the adjoining under parts of the body: at this period the two centre tail feathers have become elongated, the breast and throat have become white, though sometimes spotted a little, and the ends of the feathers of the back and wing coverts are tinged with brown, the crown of the head being dark brown. As the birds advance in age the under parts and back of the neck become white stained more or less with brown, and the sides and back of the neck are tinged with yellow; the crown of the head and the whole upper parts except the neck are an uniform dark brown, and the two tail feathers are much lengthened. In all these changes there are however considerable variations; and even in the description of the immature bird as a separate species, authors have varied according to the age of the specimen before them. Fabricius's observations ascertained that there was no difference between the sexes; and as he saw them at their breeding places he must have been aware of their difference of plumage in their young state. I learn from Mr. Temminck, who has had recent opportunities of investigating the history of this bird, that he is satisfied the males and females of the same age are alike, and that he is convinced of the specific identity of the *Larus crepidatus*. But the great difficulty is where to place the birds which have their whole under parts brown: these have been erroneously considered by many as the females, and Brünnich made them a distinct species;—the elucidation of this point must wait for further investigation. Several birds in that state of plumage, but no young ones, were killed during the voyage in the Straits.

25. PRO-

25. PROCELLARIA GLACIALIS. *Fulmar Petrel.*

P. glacialis. *Gmel.* i. 562. *Lath. Ind. Orn.* ii. 823. *Faun. Suec.* 51. *Temm.* 518. *Brün. no.* 118. *Fabr.* 86. *Müll. no.* 144.—Fulmar Petrel. *Lath. Syn.* vi. 403. *Arct. Zool.* ii. 534. *Br. Zool.* ii. 203.—Fulmar. *Mont. Dict. & Supp.*

These birds are very abundant at all times in Baffin's Bay and Davis's Straits; the greater part in the plumage described by authors generally: but some were occasionally seen in which the whole under parts as well as the head and neck were ash-coloured, instead of white; and the back and wings of a darker shade: these latter birds agree with the plumage which Temminck has assigned to the young birds; if they were such, the species is two years in attaining maturity, because we killed full-plumaged birds of this character in June; the difference cannot be sexual, as males and females in each colour were obtained.

Whilst the ships were detained by the ice in Jacob's Bay in latitude 71°, from the 24th of June to the 3d of July, Fulmars were passing in a continual stream to the northward, in numbers inferior only to the flight of the passenger pigeon in America.

Latham appears to have been in error in his *Synopsis* in referring to Brünnich as an authority for the tail of this species being black: we did not see any birds so marked.

26. ANAS SPECTABILIS. *King Duck.*

Anas Spectabilis. *Gmel.* i. 507. *Lath. Ind. Orn.* ii. 845. *Faun. Suec.* 39. *Müll. no.* 108. *Fabr.* 63.—King Duck. *Arct. Zool.* ii. 554. *Lath. Syn.* vi. 473. *Br. Zool.* ii. 246. *Mont. Dict. & App.*

I am indebted to Mr. Skene, midshipman of the Isabella, for the only male specimen of this most beautiful Duck, which was shot during our voyage. They were very numerous on the coast of Greenland in company with the Eider Ducks; but they were too shy to approach the ships, and opportunities of seeking them

on

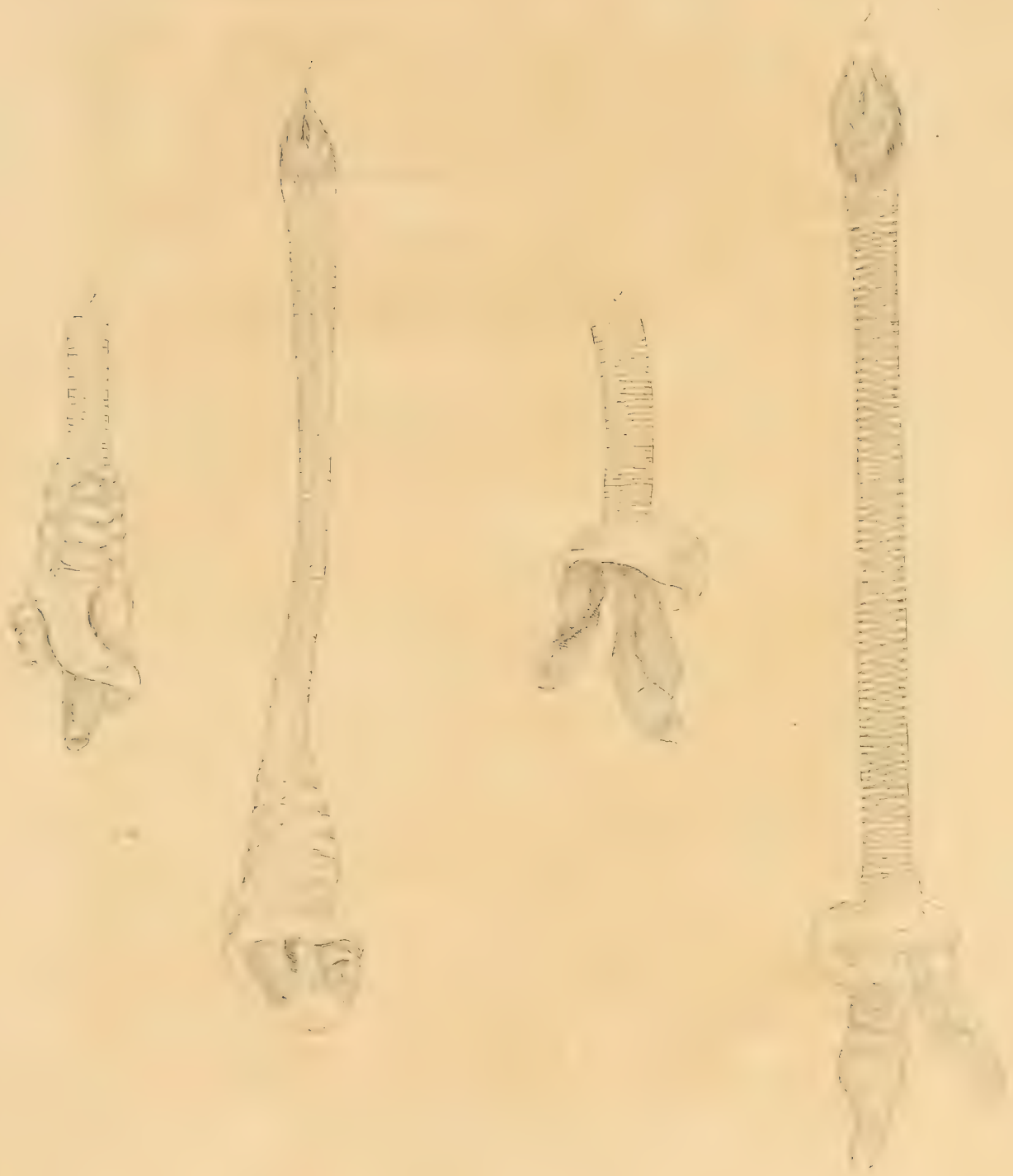
on shore were very rare and very hurried. Two females were killed, agreeing as well as the male with the descriptions of authors. It is reasonable to suppose that they are the same number of years in attaining maturity as the Eider Duck; but the different states of their immature plumage have not as yet been noticed. This is one of the desiderata which it is hoped the next voyage will supply. The rarity of this bird in the milder parts of Europe, and the want of specimens of it in the best collections, have occasioned it to be imperfectly known, except amongst the writers on the ornithology of the northern regions. Temminck in his *Manuel* considers it as the *Anas mollissima* in one of its changes; this is the cause that there is no reference to his work amongst the books cited. It is however noticed in the second edition of his *Manuel*, now preparing for publication, as a distinct species.

The trachea of the King Duck has so close a resemblance to that of the *Anas mollissima* or Eider Duck, that one description and figure will suffice for both: they are represented in the annexed plate. Tab. XXX. Fig. 1 and 2.

27. ANAS MOLLISSIMA. *Eider Duck.*

A. Mollissima. *Gmel.* i. 514. *Lath. Ind. Orn.* ii. 845. *Temm.* 549. *Müll. no.* 116. *Fabr.* 68. *Brün. nos.* 57, 58, 59, 60, 61, 62, 63, 64, 65, & 66. *Faun. Suec.* 41.—Eider Duck. *Lath. Syn.* vi. 470. *Supp.* 274. *Br. Zool.* ii. 243. *Mont. Dict. & Supp. Arct. Zool.* ii. 553. *Wil. Am. Orn.* viii. 122 (male). 125 (female).

Abundant on the coast of Greenland; but we were not fortunate in obtaining many specimens. According to Fabricius these Ducks congregate in immense flocks during the winter. Brünnich has described the male of various ages, as well as the female, and several varieties: according to his account the male is not perfectly mature in plumage till the fourth year; he describes the male at one year old as having white as well as black markings on various



E. Browne. delt.

various parts; but a young male which was killed in June exactly resembled the female in colour, though much larger in size. A specimen of a young male, which I obtained in June, had no appearance of change from the brown plumage, and certainly was not a bird of that year; I have therefore formed an opinion on this point different from that of Brünnich. The trachea of the male is uniform in size, rather compressed; the tympanum is small and flatly globose; the branchiæ are of different sizes, the larger one being dilated considerably in the centre.

28. ANAS GLACIALIS. *Long-tailed Duck.*

A. Glacialis. *Gmel.* i. 529. *Lath. Ind. Orn.* ii. 864. *Temm.* 558.—Anas Hyemalis. *Fabr.* 71. *Müll. no.* 123. *Faun. Suec.* 44 & 47. *no.* 133 (female). *Brün. nos.* 75, 76, 77, 78, & 79.—Long-tailed Duck. *Lath. Syn.* vi. 528 (male). & 529 (female). *Br. Zool.* ii. 268. *Arct. Zool.* ii. 566. *Mont. Dict. Supp. & App. Wil. Am. Orn.* viii. 93 (male). & 96 (female).

IMMATURE. Anas Glacialis, var. γ. *Lath. Ind. Orn.* ii. 865 (female).—Anas Hyemalis. *Gmel.* i. 529.—Long-tailed Duck. *Arct. Zool.* ii. 566. & *App.* 76.

As the Long-tailed Duck only winters in Europe, returning to the arctic regions in the summer, the state of its plumage at the time we were in Baffin's Bay is interesting. I obtained a specimen of a mature male on the 30th of June. Its winter dress has been detailed by several of the authors referred to, but I believe a description of its summer plumage will be new. The whole under part of the neck and the breast is black, the appearance of the black spot so conspicuous in winter being removed by the general diffusion of the dark feathers; the sides of the head and a little beyond the eye are a brownish white; round the eye are some white feathers; from the bill a black line runs on the top of the head to the crown, which is black; the back of the neck is chiefly black, but at a small distance below the crown a few white feathers are intermingled with the black ones across

the neck; the black of the back of the neck extends down the back, but in the centre of the upper part of the back near the neck is a patch of black feathers edged with ferruginous; the scapulars are long and narrow, black in the centre and edged with ferruginous-white, the longer ones having more white; the wings are a brownish-black, the quill feathers being the palest; the lower belly and sides to the rump and the under tail-coverts are white, a line of black descending between the white from the back to the tail; of the four middle tail-feathers two are eight inches, the others are about four and a half inches long. Brünnich gives this bird in five different states of sex and plumage, the second (No. 76) is the male in summer plumage. Montagu, in the *Appendix* to his *Supplement*, has described the trachea well; the figures in the annexed engraving, Tab. XXX. fig. 3 and 4, will convey a very correct idea of its appearance: it is most curious and singular in its construction; the window-like formation at the lower part next the tympanum is particularly so.

Subjoined is a complete list of the birds of Greenland, as far as I conceive they are at present ascertained; the *Fauna Groenlandica* has been taken as the foundation thereof, and the alterations which appear to be necessary have been made in it.

The species enumerated by Fabricius are fifty-four: I have reduced five of these, considering them as synonyms of some of the others, but have enlarged the list again by the addition of an equal number of species which had not fallen under the notice of that author; the names of the five reduced species are placed in italics under those to which I have referred them; and the added species are marked with an †; in those cases where I have given the bird of the *Fauna Groenlandica* under a more correct name, the synonym of that work follows in the same line in italics. The birds which are marked * are described in the preceding pages.

1. Falco

1. Falco Albicilla. *Vultur Albicilla.*
* 2. ——— Islandicus. *Falco Islandus.*
——— *rusticolus.*
——— *fuscus.*
†* 3. ——— peregrinus. Not mentioned by Fabricius, or by any other author, as a bird of Greenland.
4. Strix nyctea.
5. ——— asio. Fabricius had not seen this bird himself.
* 6. Corvus corax.
* 7. Tetrao lagopus.
* 8. Emberiza nivalis.
9. Fringilla Lapponica.
10. ——— linaria.
* 11. Sylvia Oenanthe. *Motacilla Oenanthe.*
12. Parus bicolor. Not seen by Fabricius.
13. Ardea cinerea. Not seen by Fabricius.
14. Scolopax Lapponica. *Scolopax Jardreka.*
15. ——— gallinago. This and the preceding species are very rare according to Fabricius.
* 16. Tringa maritima. *Tringa striata.*
17. ——— interpres. Not seen by Fabricius.
†* 18. ——— cinerea. Not mentioned by Fabricius or by any other author as a bird of Greenland.
* 19. ——— Alpina.
* 20. Charadrius hiaticula.
21. ——— pluvialis. *Charadrius apricarius.*
* 22. Phalaropus hyperboreus. *Tringa lobata.*
* 23. ——— platyrynchos. *Tringa fulicaria.* Not seen by Fabricius, but described as a Greenland bird by Brünnich.
24. Alca impennis.

25. Alca torda.
—— *pica.*
26. —— Arctica.
* 27. —— alle.
†* 28. Uria Brünnichii. Not described before as a bird of Greenland.
* 29. —— grylle.
30. Colymbus glacialis.
* 31. ——— septentrionalis.
* 32. Sterna hirundo.
* 33. Larus marinus.
* 34. —— glaucus.
†* 35. —— argentatus. Not noticed by Fabricius.
* 36. —— eburneus. *Larus candidus.*
* 37. —— tridactylus.
—— *cinerarius.* Not seen by Fabricius.
†* 38. —— Sabini. A new species.
* 39. Lestris parasiticus. *Catharacta parasitica.*
* 40. Procellaria glacialis.
41. ——— puffinus.
42. Mergus merganser. Not seen by Fabricius.
43. ——— serrator.
44. Anas anser. Not seen by Fabricius.
45. —— bernicla.
* 46. —— spectabilis.
* 47. —— mollissima.
48. —— boschas.
49. —— clangula.
—— *glaucion.*
* 50. —— hyemalis.
51. —— histrionica.

52. Peli-

52. Pelicanus carbo.
53. ——— graculus. *Pelicanus cristatus.*
54. ——— Bassanus. Only seen off the coast; not an inhabitant.

Of the above fifty-four species, I have in the preceding pages described twenty-eight which came immediately under my own observation. Of the twenty-six species which I did not meet with, six were not even seen by Fabricius, and others are unquestionably rare birds in Greenland.

XXXV. *Characters and Description of* Lyellia, *a new Genus of Mosses, with Observations on the Section of the Order to which it belongs; and some Remarks on* Leptostomum *and* Buxbaumia. *By Robert Brown, Esq. F.R.S. Libr. L.S.*

Read April 6, 1819.

In the tenth volume of the Society's Transactions, I have given a description of *Dawsonia*, a genus of Mosses having entirely the habit of *Polytrichum*, but whose peristomium, instead of consisting of a single row of short teeth connected by a horizontal membrane, is composed of an indefinite number of capillary cilia. These cilia, originating both from the inner surface of the capsule, immediately within the orifice, and from the columella itself, form a loose pencil, of which the hairs are sufficiently distinct to allow of a gradual discharge of the seeds.

The correctness of this account of *Dawsonia*, especially as to the origin of the peristomium*, and the nature of the supposed columella†, has been questioned by some of those authors, who have since adopted the genus.

From a careful re-examination, however, I find no reason to alter in any respect the generic character formerly given; and to the description of the species I have only to add, that the upper surface of the leaves is furnished with parallel lamellæ, like those of *Polytrichum*; and that the inner membrane of the capsule is,

* *Bridel Meth. Nov. Muscor.* p. 205.

† *De la Pylaie in Journal de Botanique appliq.* iii. p. 134.

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